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GEOGRAPHICAL AND TAXONOMIC NOTES ON *SCYPHIPHORA HYDROPHYLLACEA* GAERTN. F. (RUBIACEAE)

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ABSTRACT

Scyphiphora hydrophyllacea, a disjunctly distributed species occurs only in two localities along the Gautami Godavari estuary in Andhra Pradesh for the entire Indian Peninsula. Details on its distribution, description and conservation measures taken are given in the paper.

Scyphiphora hydrophyllacea Gaertn. f. of the family Rubiaceae is a small evergreen tree which grows along the estuarine zones of the Coastal Andhra Pradesh. The distribution of this taxon is rather confusing, though it was recorded by Hooker (1880), Brandis (1906) and Gamble (1921) all citing Wight's (1834) collection from Carnatic Coast, without mentioning the locality clearly. Later, Sidhu (1963) reported it from East Godavari region again without specific locality. Interestingly the taxon is not represented in any of the Indian herbaria by any collection from East Coast of India.

During our botanical explorations, the species was collected from the Vuri Kalava banks near Sacramento Lighthouse (Fig. 1 Hd) (82°17′ E and 16°35′ N), Kandikuppa reserve forest of East Godavari District of Andhra Pradesh, India, in flowering and fruiting condition during March-June. It was also observed along the banks of creeks of Rati Kalava in between Guttenadevi and Bhairavapalm of East Godavari District, Andhra Pradesh, India. *Scyphiphora hydrophyllacea* is known from Andamans (Mathauda, 1959; Waheed Khan 1959; Sahni 1959; Thothathri 1962), Malayan Archipelago (Good, 1947), Siam, Philippines, Tonkin and northern parts of Australia extending to New Caledonia and Sri Lanka (Ridley 1930; Anon., 1972). The reason for its distribution from Andaman and Sri Lanka (Fig. 2) to Indian main land can be attributed as the fruits of the species are able to float for a long period without absorbing saline water and the seeds must be able to establish themselves in littoral areas either on a sand bank or a shingle beach.

The present collections of *Scyphiphora hydrophyllacea* were made twice between March-June in 1981. This monotypic species was found growing in association with *Lumnitzera racemosa* Willd., *Ceriops decandra* (Griff.) Ding Hou and *Aegiceras corniculatum* (L.) Blanco. It resembles *Lumnitzera racemosa* Willd. when sterile, but can be readily distinguished by its alternate, smaller (upto 10 cm long), subsessile, entire of crenate leaves with slightly emarginate tips, axillary spicate inflorescences, pentamerous flowers with free corolla lobes and 10 stamens.

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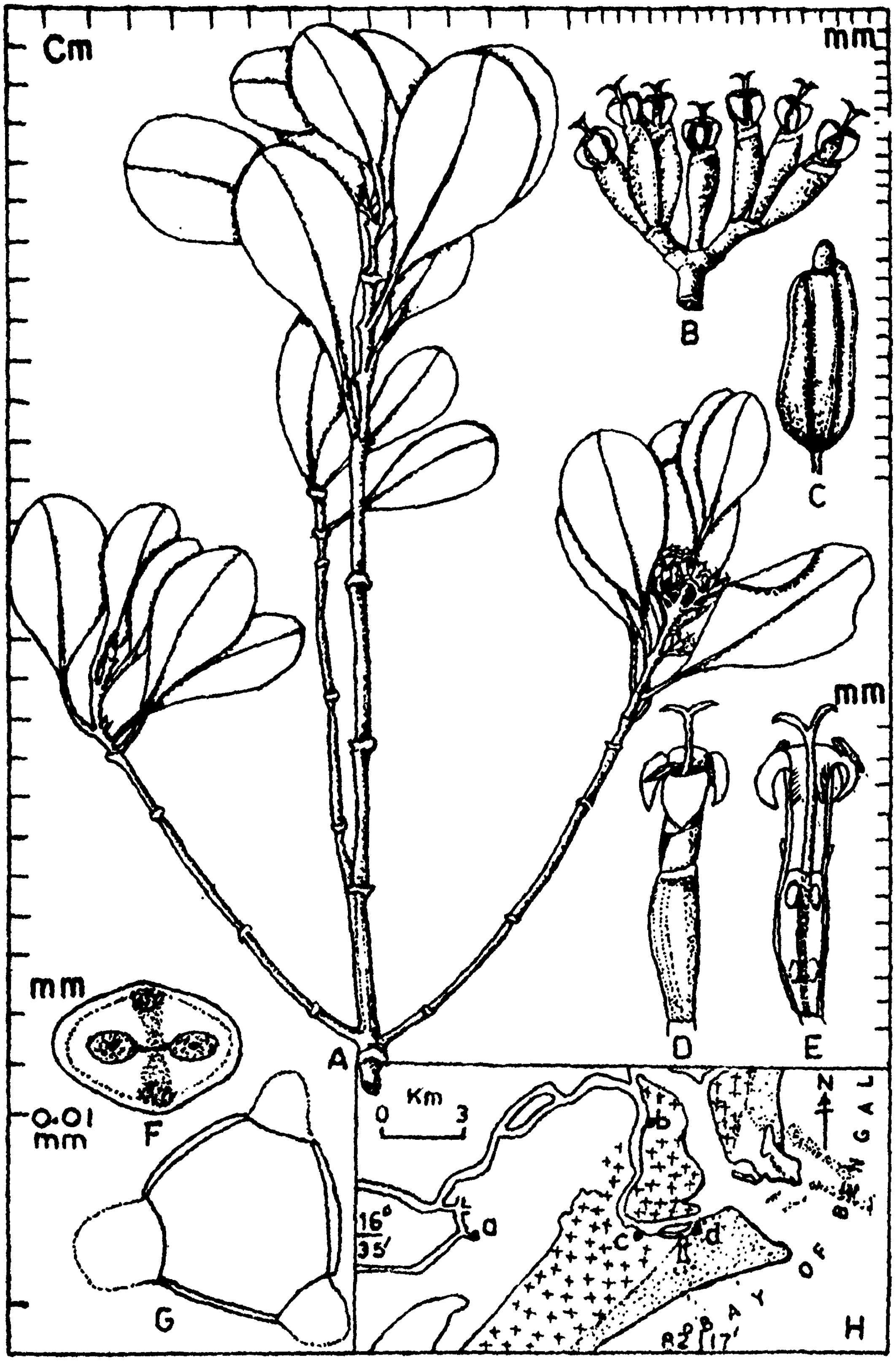

Fig. 1. (A-H): A. Twig. B. Inflorescence. C. Fruit. D. Flower. E. Flower L.S. F. Ovary T.S. G. Pollen grain. H. Map showing the present locality of the species, a. Kandikuppa, b. Balusuthippa. c. Kothapalem. d. Sacramento lighthouse.

Scyphiphora hydrophyllacea Gaertn. f., Fruct. 3 : 91. t. 196. 1805 ; Hook. f. Fl. Brit. Ind. 3 : 125. 1880 ; Gamble, Fl. Pres. Madras 2 : 438. 1921.

A glabrous evergreen tree, *ca* 3 m tall. Roots without pneumatophores. Trunk short, 10-15 cm diameter, branched from the base. Branchlets stout, swollen at the nodes internodes 2-5 cm long, young branches often with reddish tinge. Leaves 5-8 × 2.5-3.5 cm, simple, crowded on branchlets, coriaceous, shiny, obovate-oblanceolate, entire, rounded at apex, cuneate at base, mid-rib prominent, veinlets inconspicuous, young leaves gummy. Petiole 1.5 cm long, stipules short, broad and membranous. Inflorescence axillary, shortly pedunculate, dense compound dichasial cymes. Flowers small, purplish-white, 1-1.5 cm, bisexual, tetramerous, epigynous, ebracteate, ebracteolate, subsessile. Calyx united, purplish-white, tube cylindric, 3 mm long, throat dilated, simple unicellular hairs present inside the throat. Corolla lobes 4, oblong, recurved, twisted in bud. Stamens 4, epipetalous, placed at throat of the corolla tube, filaments short, anthers narrowly sagittate, 2.5 × 0.5 mm, basifixed, longitudinally dehiscent. Pollen grains prolate-spheroidal, tricolporate and psilate (Mitra, 1969). Ovary disc annual, lobed, inferior, 0.5 cm long, bicarpellary, syncarpous, bilocular, two ovules in each locule on axile placentation ; style 4 mm long, filiform, exserted from the corolla tube ; stigma bifid, linear, recurved, tip

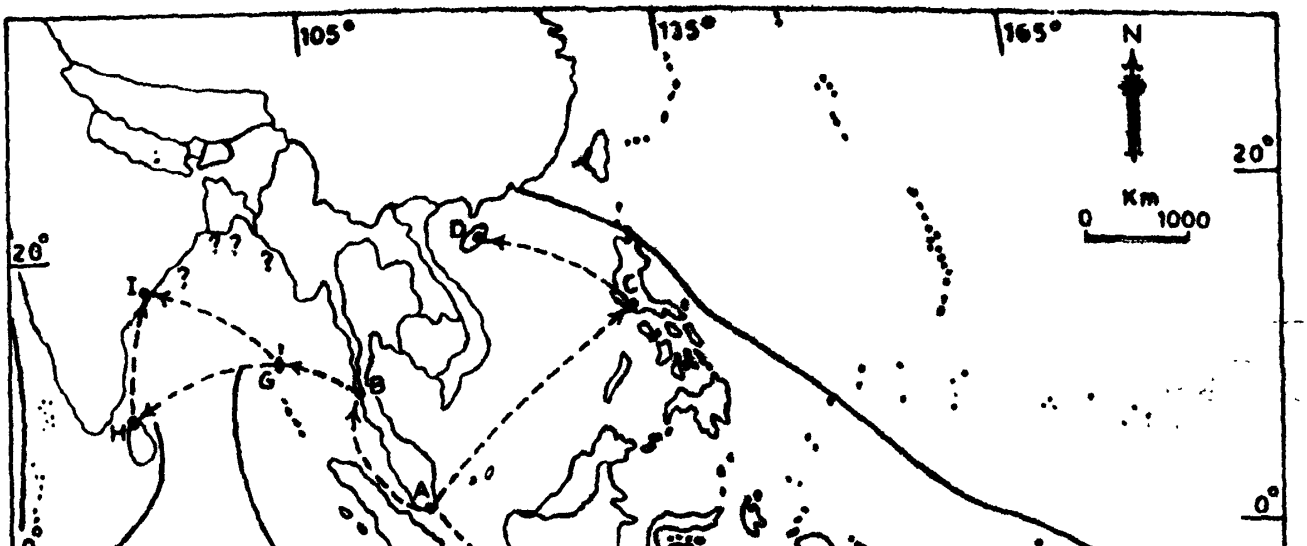

Fig. 2 (A-I): Map showing the possible distribution of the species. A. Malaysia (origin). B. Siam. C. Philippines. D. Tonkin. E. Northern Australia. F. New Caledonia. G. Andaman. H. Sri Lanka. I. Sacramento lighthouse (present locality).

obtuse. Fruit drupaceous, subcylindric, 1-1.5 × 0.5-0.6 cm, yellowish-green when young, dark brown when ripe, crowned by persistent calyx, 8-10-grooved and winged, with 2 crustaceous, connate 4-5-ribbed pyrenes.

Local name : Nara-thenduga (Telugu).

Fl. & Frt. : Feb.-June.

Specimens examined : INDIA : Andaman Islands : Port Mouat, *King s.n.* 207379 (11-7-1891, CAL); Port Mouat hill-jungle, *King s.n.* 207355 (11-7-1891, CAL); Nauglutan hill-jungle (South Andaman), *King s.n.* 207378-80 (23-7-1892, CAL); Hope Town (South Andaman), *Lace* 2830 (30-4-1905, CAL); Jungle bar, Port Blair, *Ellis* and *Rama Murty* 19010 (3-5-1964, CAL and MH); Solve near Wright Nyo (South Andaman), *Thothathri* 1500 (16-6-1974, CAL); Chiriatapu, *Bhargavan* and *Nair* 2272 (28-2-1975, CAL).

Indian Peninsula : Andhra Pradesh-Sacramento lighthouse, Kandikuppa Reserve Forest, *Venkanna* 51 (5-3-1981) and 1598 (29-6-1981) (CAL and Andhra University, Herbarium, Botany Department, Waltair).

From the reports it is evident that this species is restricted only to the estuarine parts of the Gautami Godavari, Andhra Pradesh for the entire Indian peninsula.

In view of the above, a plea was made for protection of the species and was ensured by the Andhra Pradesh Forest Department for *in situ* conservation, and the areas have been fenced by barbed wire for declaring a preserved plot of *Scyphiphora* (Rao, 1986). Although very scarce in its distribution, this plant is familiar to local fishermen community. It is also reported that the plant yields good fibre. However, the local people use the species for fuel purposes along with other mangroves.

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